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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,936	01/02/2002	Ming-Tien Chang		1398

7590 01/24/2003  
Ming-Tien Chang  
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EXAMINER

WARREN, DAVID S

ART UNIT PAPER NUMBER

2837

DATE MAILED: 01/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/034,936

Applicant(s)

CHANG, MING-TIEN

Examiner

David S. Warren

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: In the specification (page 4, line 23) reference is made to "car 70." It is recommended that the applicant either delete "70" or add this feature to the drawings.

Appropriate correction is required.

### *Claim Objections*

2. Claim 7 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The "connecting piece is welded..." does not further limit claim 1 since this limitation is already put forth in claim 1.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner et al. (4851015) in view of Watanabe et al. (4487288). Regarding claim 1, Wagner discloses the use of an exhaust tube having a manifold with left and right branches, wherein one branch connects to an "inner tube" (as defined by applicant,

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element 40a) and the other branch connects to an "outer tube" (28). Wagner also discloses the use of a valve (26) and valve seat (52). Wagner shows sealing disks (50) that are equivalent to applicant's washers. Wagner does not teach the use of a connecting piece between the two noise elimination tubes. Watanabe shows that it is well known to connect noise elimination tubes (fig. 8). Official notice is taken that welding exhaust tubes is extremely well known in the art. Regarding claim 3, Wagner shows the use of connecting tubes using screws (fig. 1A). The "locking seat" is that portion of the connection where the two tubes meet and connect. Regarding claim 6, Wagner shows a motor (48) used to control the valve. A switch for the motor is inherent. The use of gears is a functional equivalent to the levers shown by Wagner. It would have been obvious to one of ordinary skill in the art to modify the teachings of Wagner with those of Watanabe to obtain a manifold exhaust system with one branch having a controllable valve and wherein the two "noise eliminating" branches are welded together via a connecting piece. Watanabe provides a motivation for making this combination by disclosing that connecting noise elimination tubes improves sound attenuation (col. 1, lines 55-60).

5. Claims 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner et al. and Watanabe as applied to claim 1 above, and further in view of Matsuoka et al. (5992560) and Chang (6267199). Wagner and Watanabe, in combination, teach the limitations of claim 1 as discussed above. Wagner and Watanabe do not teach the use of stainless steel and cotton as noise eliminating media. Nor do they teach the use of glass fibers as a second layer for eliminating noise.

Matsuoka discloses the use of stainless steel wire cloth (18), an inorganic woven fiber (22) and a glass fiber outer layer (17). Matsuoka does not show the use of cotton as a noise eliminating fiber. Chang does disclose the use of cotton in an exhaust muffler as a noise eliminating fiber. Since each of these materials has an advantage (e.g., cost, availability, thermal stability, sound attenuation, etc.) it would have been obvious to one of ordinary skill in the art to modify the teaching of Wagner and Watanabe with those of Matsuoka and Chang. The motivation for making this combination is found in Chang who states: "The material of the muffler cotton 3 is cotton fiber or glass cotton which can withstand high temperatures." This teaches the functional equivalence or substitution for glass fiber with cotton. Thus, Matsuoka, who uses glass fiber, would also consider cotton fiber for its value at high temperatures. Wagner, Chang, and Matsuoka all show the use of an outer tube enclosing an inner tube, wherein the inner tube comprises noise eliminating holes (easily seen in most figures). Wagner shows the use of "distal tubes" (42). Wagner also shows that left tube (40a) protrudes from a first noise elimination tube (56a) (claim 2), front and rear isolation tubes (80, 88, respectively) (claim 4), and a locking seat and screws (shown in fig. 1A, element 26, although screws are shown they are not numbered) (claim 5).

### **Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patent to Wolf et al. ('955) discloses the use of fibers and steel (and multi-layering) as used in an exhaust muffler. The patents to Tadokoro et al. ('636) and Galaitsis ('047) both show the use of valve systems in an exhaust manifold.

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The patent to Fujitsu ('096) discloses the use of stainless steel enclosing an inner tube with sound eliminating holes and the use of glass fiber surrounding the stainless steel.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Warren whose telephone number is 703-308-5234. The examiner can normally be reached on M-F, 9 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on 703-308-3370. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

dsw  
January 23, 2003

  
ROBERT E. NAPPI  
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TECHNOLOGY CENTER 2800